CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

CTEH® Project #40442
West Fertilizer Plant Explosion
Summary of Air Monitoring Results
April 29, 2013 10:00

This data report discusses real-time air monitoring data collected between 4/28/2013 07:00 and 4/29/2013 07:00 in support of remediation operations conducted near the West Fertilizer Plant Explosion in West, TX.

Real-time air monitoring was conducted for volatile organic compounds (VOCs), ammonia (NH_3), nitrogen dioxide (NO_2), using remote-telemetering RAESystems® AreaRAEs and hand-held instruments such as the RAESystems® MultiRAE and Gastec® colorimetric detector tubes.

Tables 1 and 2 (below) display data summaries for hand-held and AreaRAE instruments, respectively. Site maps and charts are available as attachments.

Table 1: Hand-held Real-time Air Monitoring Summary[1]
April 28, 2013 07:00 – April 29, 2013 07:00

Analyte	Instrument	Number of Readings	Number of Detections	Average of Detections	Range of Detections
Community					
Ammonia	MultiRAE	2	0	NA	< 0.2 ppm
NO_2	Gastec 9L	1	0	NA	< 0.1 ppm
	MultiRAE	2	0	NA	< 0.1 ppm
Work Area					
Ammonia	MultiRAE	9	0	NA	< 1 ppm
VOC	MultiRAE	2	0	NA	< 0.1 ppm

[1] *Please note: The data displayed here has not undergone complete QA/QC analysis and is presented in a preliminary format.*
PPM = Parts Per Million

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Table 2
Stationary AreaRAE Monitoring Stations Data Logged
4/28/2013 07:00 to 4/29/2013 07:00

Unit	Analyte	Count of Readings	Count of Detections	Average of Detections	Max Detection
AR13	NH3	5126	0	NA	< 1 ppm
	NO2	1321	0	NA	< 0.1 ppm
	VOC	5126	0	NA	< 0.1 ppm
AR14	NH3	4212	0	NA	< 1 ppm
	NO2	1211	0	NA	< 0.1 ppm
	VOC	4212	0	NA	< 0.1 ppm
AR16 Mobile Down Wind Unit	NH3	3887	0	NA	< 1 ppm
	NO2	1278	0	NA	< 0.1 ppm
	VOC	3887	1	0.1 ppm	0.1 ppm
AR17	NH3	4802	0	NA	< 1 ppm
	NO2	1322	0	NA	< 0.1 ppm
	VOC	4802	0	NA	< 0.1 ppm
AR18	NH3	4938	0	NA	< 1 ppm
	NO2	1341	0	NA	< 0.1 ppm
	VOC	4938	7	0.3 ppm	0.6 ppm

[1]*The data in this table may include electronic drift. Drift is defined as any interference in the electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity and temperature changes throughout the monitoring period are typical sources of drift. Additionally, the data has not undergone complete QAQC as of this time.*

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Appendix

Air Monitoring Zone Classifications[1] April 29, 2013

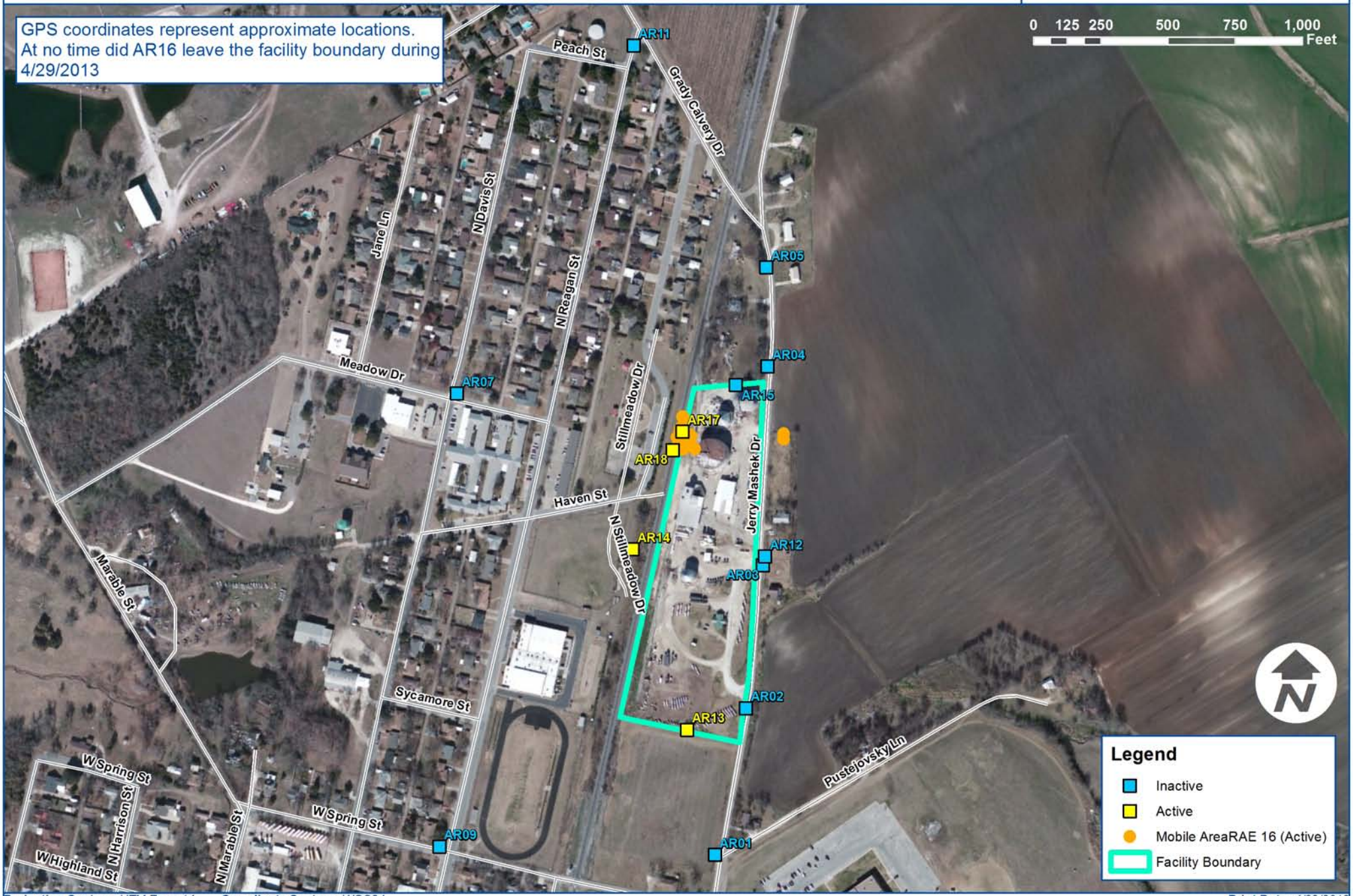
Project: 40442
Client: OMI
City: West, TX
County: McLennan

[1] All monitoring performed outside of the Work Area boundary and the Rail Road right of way is considered Community Monitoring.

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/29/2013*

AreaRAE Monitoring Station Locations 4/29/2013

Project: 40442
Client: OMI
City: West, TX
County: McLennan



Projection System: *UTM Zone 14* **Coordinate System:** *WGS84* **Print Date:** *4/29/2013*

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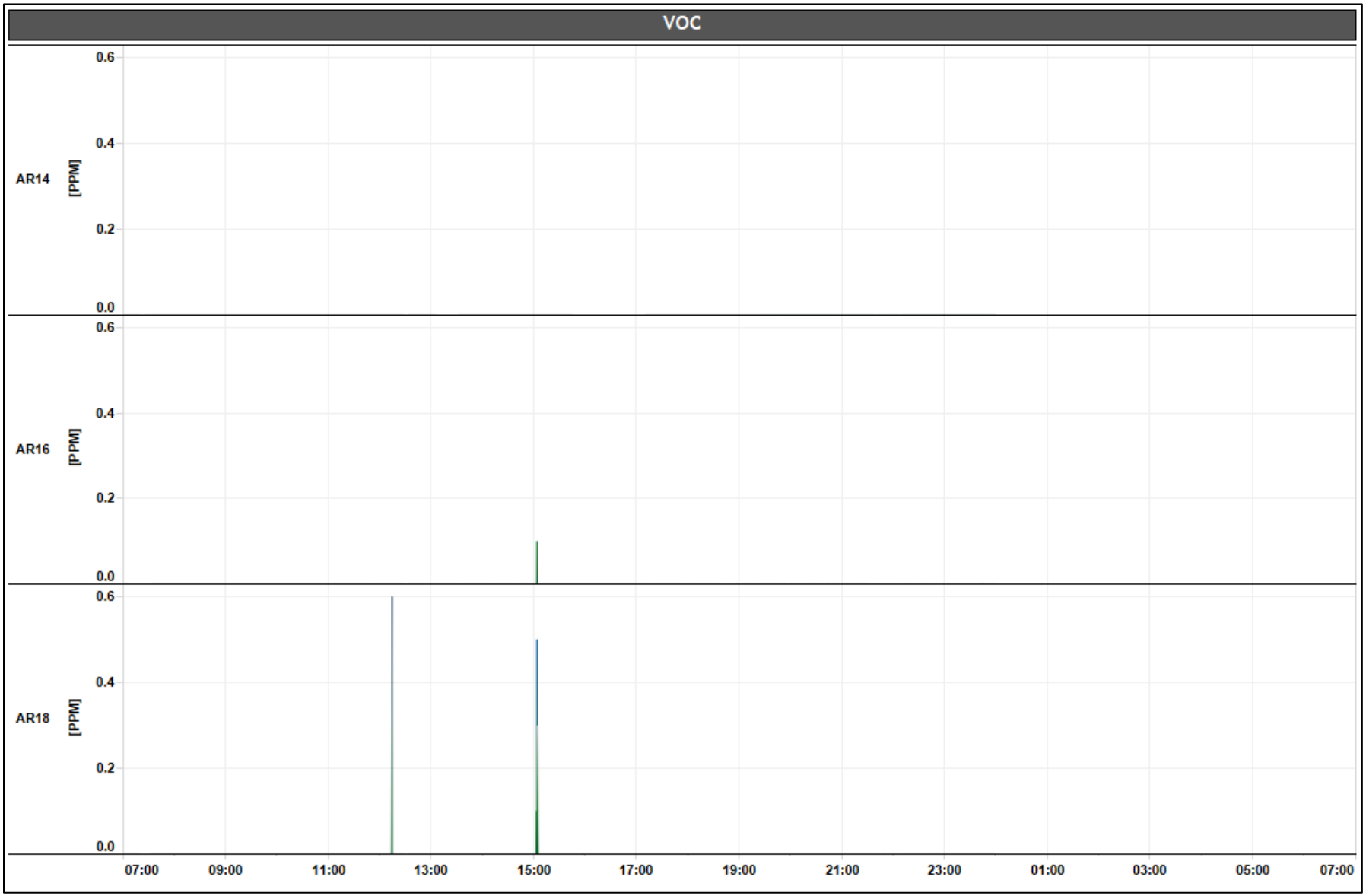
AreaRAE Detections
4/28/2013 07:00 to 4/29/2013 07:00



Manually Logged Ammonia Real-Time Readings 4/28/2013 07:00 to 4/29/2013 07:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/29/2013*

Manually Logged NO_2 Real-Time Readings
4/28/2013 07:00 to 4/29/2013 07:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/29/2013*

Manually Logged VOC Real-Time Readings 4/28/2013 07:00 to 4/29/2013 07:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

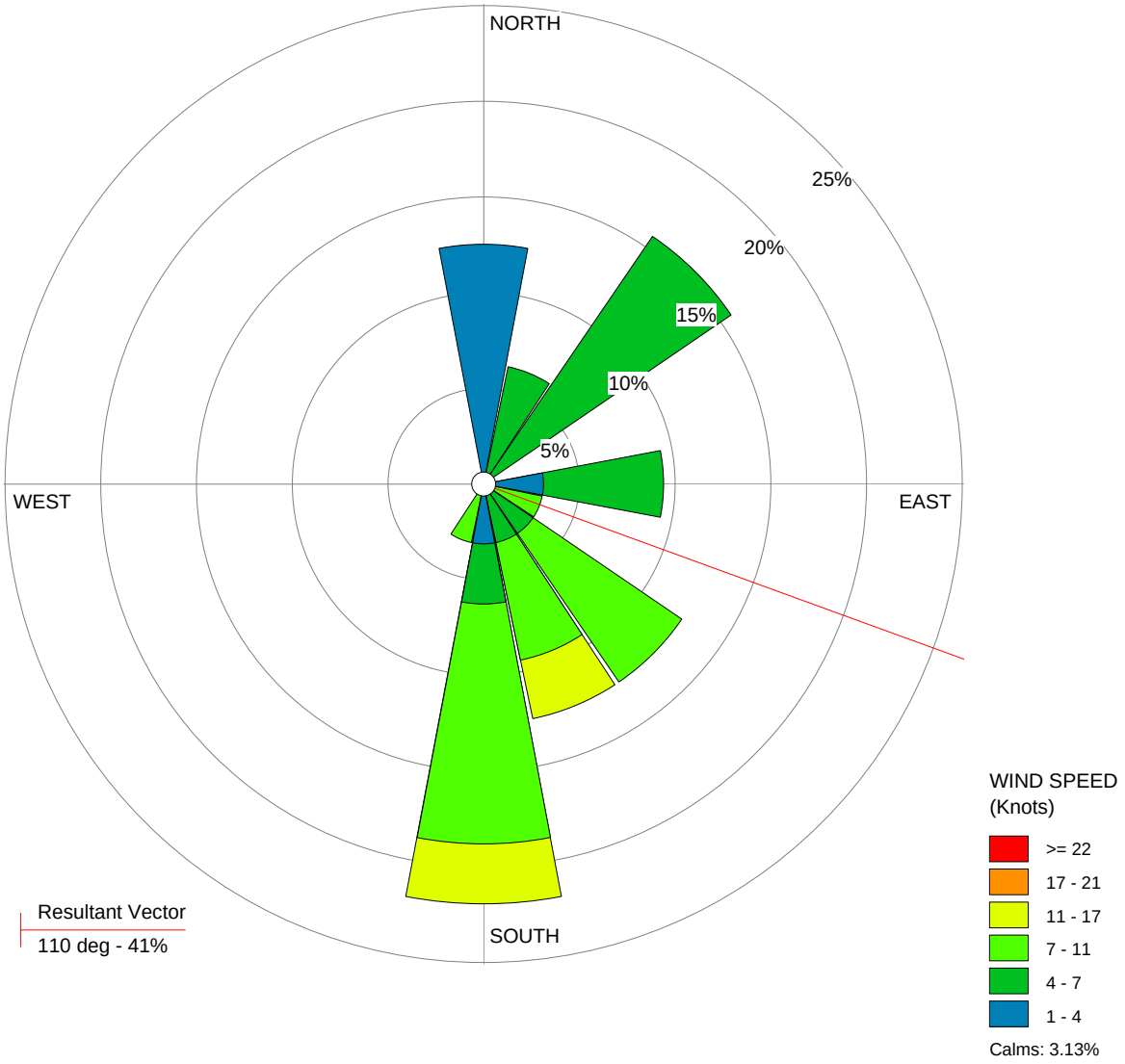
Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/29/2013*

WIND ROSE PLOT:

Wind Speed and Direction 4/28/2013 07:00 to 4/29/2013 7:00
West, Tx

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

Met Station: KACT Waco, TX

COMPANY NAME:

CTEH

MODELER:

Jason Callahan

CALM WINDS:

3.13%

AVG. WIND SPEED:

6.19 Knots

PROJECT NO.:

40442 - OMI